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ABSTRACT

Two studies investigated whether two conventions in the use of adversative conjunctions in English are acquired by native Spanish-speakers who are highly proficient in English. The two conventions are: (1) selection of "but" to introduce foreground information and (2) use of "although" to introduce background information. Subjects in the first study, conducted in Spanish, were 37 monolingual Spanish-speaking graduate students. Subjects in the second study were 42 native Spanish-speaking graduate students in the United States, all highly proficient in English. In each study, subjects completed two tasks. In the first, they were required to choose either "pero/"but" or "anque/although" to unite two propositions in a sentence. In the second, they read a sentence containing two propositions connected by one of these conjunctions and chose a continuation sentence that elaborated on one of the propositions. Results showed that there is a discourse rule of focus for the use of "pero and anque" in Spanish that parallels the English rule. However, as in English, this rule is not followed by all well-educated native Spanish-speakers. It was those Spanish speakers who follow the rule in Spanish that also follow it in English. Contains 21 references. (MSE)

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CROSSLINGUISTIC INFLUENCES ON THE ACQUISITION OF DISCOURSE LEVEL CONSTRAINTS ON THE COMPREHENSION AND USE OF ADVERSATIVE CONJUNCTIONS

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ABSTRACT

Conjunctions draw attention to and make explicit the logical relationships between propositions. Consequently mastery of the conjunctions of a language is a very important aspect of the acquisition of literacy skills in that language.

McClure and Geva (1983) demonstrated that most college educated adult native speakers of English select *but* to introduce foreground information and *although* to introduce background information and also use them in texts to determine an author's focus. This paper examines whether these conventions are acquired by highly proficient English speakers who are native Spanish speakers.

Forty native Spanish speakers were the subjects. Twenty completed a task requiring them to select either *but* or *although* to unite two propositions in a sentence. The other twenty completed a task requiring them to read a sentence containing two propositions connected by *but* or *although* and choose a continuation sentence which elaborated on one of the propositions. Subjects completed one task in Spanish and the other in English.

Results on the English language tasks showed that although all the subjects were very fluent English speakers, none adhered completely to the discourse level focus rule governing the use of *but* and *although* in English. These findings appear to reflect negative transfer from Spanish.

INTRODUCTION

In the seventies, studies of transfer, shaped up to that time predominantly by the behaviorist paradigm, went into temporary eclipse. The rise of cognitive psychology and Chomskian

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linguistics led to approaches in second language acquisition research which emphasized the learners' active and creative construction (e.g. Dulay and Burt 1974, 1975). However, since the existence of crosslinguistic influences is undeniable, the reconceptualization of transfer as a process within a cognitivist paradigm soon followed, and during the last few years crosslinguistic phenomena have received increasing attention (e.g. Gass and Selinker 1983; Kellerman 1979; Kellerman and Sharwood Smith 1986; McClure and Branstine 1990; McLaughlin 1987; Odlin 1989).

Concomitant with the resurgent interest in transfer, there has also been a focus on ultimate attainment in second language acquisition. The prevailing view is that native competence cannot be achieved by postpubertal learners (e.g. Coppierters 1987; Hyltenstam 1990; Johnson and Newport 1989, 1991; Long 1990; Patkowski 1980; Sorace 1991a, 1991b). However, Birdsong 1992 provides evidence which suggests that there are exceptions to this generalization.

The present study combines both a focus on transfer and a focus on ultimate attainment, investigating crosslinguistic influences on the acquisition of discourse level constraints on the comprehension and use of adversative conjunctions by highly proficient second language learners. The conjunctive relation is a very important resource in communicating new information because it is "a specification of the way in which what is to follow is systematically connected to what has gone before" as Halliday and Hasan state (1976, p. 227). Conjunctions act as clues drawing attention to and making explicit the logical relationships between propositions. In oral discourse these relationships may be made clear by context or paralinguistic features. However, in the written mode, conjunctions may be the only clue to the author's perception of the relationship between propositions. Consequently mastery of the conjunctions of a language is a very important aspect of the acquisition of literacy skills in that language.

But and *although* are both adversative conjunctions. However, *but* is a coordinator, *although* a subordinator. McClure and Geva (1983) demonstrated that a majority, but not all, of college educated adult native speakers of English select *but* to introduce foreground information and *although* to introduce background information and also rely on their use in texts to determine an author's focus. This paper examines first whether these discourse conventions obtain in the use of *pero* and *aunque*, the Spanish equivalents of *but* and *although*, and second whether they are applied in English by proficient non-native speakers of English who are native speakers of Spanish.

STUDY I

In study I, we first investigate what discourse rules monolingual Spanish speakers employ in choosing between the adversative conjunctions *pero* and *aunque*. Following McClure and Geva (1983), we examine whether *pero* and *aunque* are selected in accordance with:

(1) a rule of focus:

$$\text{CONJUNCTION}_{\text{adversative}} \longrightarrow \begin{cases} \text{aunque} & / \ __S_{\text{background}}\,S_{\text{foreground}} \\ & / \ S_{\text{foreground}}\,__\,S_{\text{background}} \\ \text{pero} & / \ S_{\text{background}}\,__\,S_{\text{foreground}} \end{cases} \quad 3$$

(2) a syntactic rule:

$$\text{CONJUNCTION}_{\text{adversative}} \rightarrow \begin{matrix} \text{aunque} & / & __S_1\ S_2 \\ \text{pero} & / & S_1__S_2 \end{matrix}$$

(3) random choice; or

(4) a combination thereof.

Second, we investigate what discourse rules monolingual Spanish speakers employ in determining what information relevantly follows a Spanish sentence composed of two propositions conjoined with *pero* or *aunque*. Again following McClure and Geva 1983, we examine whether Spanish speakers behave randomly or in accordance with principles of cohesion based on: (a) primacy, (b) recency, (c) propositional salience, (d) the conjunction as lexical item, or (e) the conjunction as subordinator or coordinator marking focus.

METHOD

Materials

Twelve basic sentences were used to create the items for this study. Each consisted of two propositions which might be appropriately conjoined with either *but* or *although*. The propositions in each pair were selected so that either could occur in initial position regardless of the conjunction used. Thus each basic sentence had six alternative forms. Labeling one proposition A and the other B, the six possibilities were: (1) A *but* B, (2) B *but* A, (3) A *although* B, (4) B *although* A, (5) *Although* A, B, and (6) *Although* B, A. They may be exemplified as follows:

(1)	A *but* B	The box was large, but it was light.
(2)	B *but* A	The box was light, but it was large.
(3)	A *although* B	The box was large, although it was light.
(4)	B *although* A	The box was light, although it was large.
(5)	*Although* A, B	Although the box was large, it was light.
(6)	*Although* B, A	Although the box was light, it was large.

Two continuations were constructed for each of the twelve basic sentences. One continuation sentence elaborated on each of the two propositions of the original basic sentence. Thus for the basic sentence whose propositions were *The box was large* and *the box was light*, the continuations were: *So it was easy to lift* and *So it could hold a lot*. Given that the focus of the original sentence was on the size of the box, the appropriate continuation was *So it could hold a lot*. Given a focus on the weight of the box, the appropriate continuation was *So it was easy to lift*. Again, there were six possible permutations for each basic sentence. For the box example these were:

(7) A *but* B.B' The box was large, but it was light. So it was easy to lift.

(8)	B *but* A.A'	The box was light, but it was large. So it could hold a lot.
(9)	A *although* B.A'	The box was large, although it was light. So it could hold a lot.
(10)	B *although* A.B'	The box was light, although it was large. So it was easy to lift.
(11)	*Although* A, B.B'	Although the box was large, it was light. So it was easy to lift.
(12)	*Although* B, A.A'	Although the box was light, it was large. So it could hold a lot.

Two types of items were created from the basic sentences plus continuations. In type one, two sentences were presented. The first sentence contained two propositions and the two adversative conjunctions. The second sentence elaborated on one of the propositions of the first sentence. Subjects had to circle the preferred conjunction in the first sentence. A sample item appears below:

(13) The box was large *but/although* it was light. So it was easy to lift.

In the second type of item, the conjunction was supplied and subjects had to select the preferred continuation from two alternatives as in the following example:

(14) The box was light, although it was large.
  a. So it was easy to lift.
  b. So it could hold a lot.

Since a seventy-two item booklet seemed too long and too repetitive, the seventy-two type one items produced from the six alternatives of the twelve basic sentences plus continuation sentence were divided into two booklets of thirty-six items. Each booklet contained twelve sentences to be conjoined with *but*, twelve to be conjoined with initial *although*, and twelve to be conjoined with medial *although* distributed evenly throughout the booklet. The seventy-two type two items were similarly divided into two booklets of thirty-six items each. Each of the four booklets so produced was then translated into Spanish, thus producing a total of eight booklets. In study I, the type one booklets contained only twenty-four items. The twelve items beginning with a conjunction were omitted because of a ceiling effect - virtually all informants scored 100% on such items in a previous study (McClure and Geva (1983)).[1]

Subjects

The subjects for this study were 37 graduate students from a university in central Mexico. All were monolingual Spanish speakers.

Procedure

All subjects completed both the conjunction choice and the sentence choice tasks. Sub-

jects completed one task and then were given the other task. Booklet and order of presentation of task were counterbalanced.

RESULTS AND DISCUSSION OF SPANISH CONJUNCTION CHOICE

This study was designed to determine whether given a two-proposition sentence and a subsequent sentence indicating upon which initial sentence proposition focus centered, subjects followed a rule in choosing between *pero* and *aunque*. Responses were scored in conformity with the rule of focus proposed by the investigator. *Aunque* was the correct response where a conjunction introduced a proposition which was not focused upon. *Pero* was the correct response where a conjunction introduced a focal proposition. It was possible to determine the focal proposition in the first sentence by reading the continuation sentence.

The data from the conjunction choice task were analyzed in terms of two subtests: items requiring *pero* and items requiring *aunque*. The data were then subjected to an analysis of variance with conjunction type as a within-subjects factor and form as a between subjects factor. The dependent variable was the score of each of the two subtests defined by conjunction type. No significant effect was found for conjunction type ($F(2,36)=.529$, $p<.469$). Looking at the mean scores (X(*pero*) = 7.46, X(medial *aunque* = 7.78) might suggest that responses were made at random. However if one looks at each subject's response pattern, it would appear that several did conform to a rule of focus.

If subjects respond completely at random the experiment is a Bernoulli process; subjects have a .5 probability of success on each item. Therefore the binomial formula may be used to calculate the probability of a subject's scoring a given number of correct responses by chance (Lapin, 1973, p. 140). Since subjects' scores may range from 0 to 12, the probability of the chance occurrence of a score greater than or equal to 9 is $p<.05$ as is the probability of a score less than or equal to 3. We have therefore considered these scores to be indicative of rule governed rather than random behavior.

Of the 37 subjects, ten scored nine or above on both the *pero* and *aunque* items. These subjects would appear to have followed the proposed rule of focus.

RESULTS AND DISCUSSION OF THE SPANISH CONTINUATION SENTENCE CHOICE TASK

The Spanish conjunction choice test investigated Spanish speakers' use of a rule in selecting an adversative conjunction to unite two propositions when the focus of the conjoint sentence was indicated by a subsequent sentence. The Spanish continuation sentence choice test was designed to investigate whether Spanish speakers used the conjunction to detect an author's intended focus in a sentence and chose a sentence which cohesively further developed that proposition. In accordance with the rule of focus proposed above, continuations were scored correct when they elaborated on the first of two propositions conjoined by medial *aunque* and on the second of two propositions conjoined by *pero* or initial *aunque*.

The data were subjected to a one-way analysis of variance with conjunction type as a

within-subjects factor. The dependent variable was the score of each of the two subtests defined by conjunction type. There was a significant effect ($F(2,35)=6.8764$, $p<.0016$). A Newman-Keuls post hoc comparison of means ($p<.05$) indicated that the scores on the initial *aunque* subtest ($X = 8.1111$ and on the *pero* subtest ($X = 7.6944$) were significantly higher than the score on the medial *aunque* subtest ($X = 6.3333$) (see table 1). There was no significant difference between the scores on the first two subtests.

TABLE 1
Choice of continuation sentence task

	Conjunction in the first sentence		
	medial aunque	pero	initial aunque
means	6.3333	7.6944	8.1111
standard deviations 1.8048	2.4121	2.1217	

(N = 36)
($F = 6.8764$, $p < .0016$)

Medial *aunque* is significantly different from *pero* and initial *aunque* which are not different from one another

Let us now consider whether the data indicate that the subjects followed the rule proposed by the investigator, used some other strategy, or responded at random. Other possible strategies include: (a) a primacy rule, (b) a recency rule, (c) a lexical rule, and (d) a semantic salience rule. Subjects strictly following a primacy rule would always choose continuations which elaborated on the first proposition of each basic sentence. Consequently, their responses would be scored as correct for items in which propositions were conjoined by medial *aunque* and as incorrect for all other items. Thus, their responses would accord with Part 2 of the proposed rule of focus, but would fail both of the subtests for Part 1. Subjects following a recency rule would choose continuations elaborating on the second proposition of each basic sentence. Thus, they would receive high scores on the *pero* and initial *aunque* subtests and low scores on the medial *aunque* subtest. Two contradictory lexical rules can be envisioned: one stating that *pero* directs focus to an initial proposition and *aunque* to a final proposition, the other stating the reverse. Subjects following the former rule would score high on the initial *aunque* subtest and low on the other two subtests. Subjects following the latter rule would score high on the *pero* and medial *aunque* subtests and low on the initial *aunque* subtest. Finally, subjects responding in accordance with a semantic salience rule would elaborate on the proposition they considered most salient regardless of the order of the two propositions or of the conjunction. Therefore, they would select the same continuation for all given permutations of a basic two-proposition sentence.

Of the 36 subjects, two had scores greater than or equal to 9 on all three subtests and therefore appear to have behaved in conformity with the proposed rule of focus.

There is no evidence to support a primacy rule as there are no subjects whose scores

followed a pattern of 9 or above on medial *aunque* items and chance or less on the other items. Six subjects may have been influenced by a recency rule since they scored nine or above on both the *pero* and initial *aunque* subtests and six or seven on the medial *aunque* subtest. These subjects thus perform well where both a recency rule and the proposed rule of focus would predict the same choice and randomly where they are in conflict. Perhaps this pattern reflects alternate use of both rules. There is no clear evidence of the use of any other rule of discourse in the data.

In summary, then, the data from study I suggest that some but by no means all native Spanish speakers (about 5.5% in this sample) follow the proposed rule of focus in their choice and interpretation of *pero* and *aunque*.

STUDY II

Subjects

In the second study we examine the use of adversative conjunctions by native Spanish speakers who are highly proficient L_2 speakers of English. Of interest is whether their use of *but* and *although* follows the same discourse rules as their use of *pero* and *aunque*.

The subjects for this study were forty-two graduate students from a large midwestern university who were native speakers of Spanish. All were highly proficient English speakers. Their length of residence in the U.S. ranged from two months to thirteen years, with a mean of 3.17 years. Twenty-eight had spent at least two years in the U.S.

Procedure

Half the subjects completed the conjunction choice task in Spanish and the sentence choice task in English, the other half completed the conjunction choice task in English and the sentence choice task in Spanish. Booklet and order of presentation of task and of language were completely counterbalanced.

RESULTS AND DISCUSSION OF SPANISH CONJUNCTION CHOICE TASK

As in study I, this part of study II was designed to determine whether given a two-proposition sentence and a subsequent sentence indicating upon which initial sentence proposition focus centered, subjects followed a rule in choosing between *pero* and *aunque*. Responses were scored as in study I. However in this study since no previous investigations of the use of *pero* and *aunque* existed, twelve items containing sentences which correctly began with *aunque* were included to increase the parallelism with the sentence choice task.[2]

The data from the conjunction choice task were analyzed in terms of three subtests: items requiring *pero*, items requiring *aunque* in sentence initial position, and items requiring *aunque* in sentence medial position. The maximum score on each subtest was 12.

The data were subjected to a one-way analysis of variance with conjunction type as a within-subjects factor. The dependent variable was the score on each of the three subtests defined by conjunction type. There was a significant effect ($F(2,60)=13.3347$, $p=.0000$). A Newman-Keuls post hoc comparison of means ($p<.05$) indicated that the scores on the initial *aunque* subtest ($X = 11.9524$) were significantly higher than the scores on both the *pero* ($X = 9.7619$) and the medial *aunque* ($X = 8.8571$) subtests (see table 2). There was no significant difference between the scores on the latter two subtests.

TABLE 2
Spanish conjunction choice task

	Conjunction in the first sentence		
	medial aunque	pero	initial aunque
means	8.8571	9.7619	11.9524
standard deviations	2.6511	2.2114	.2182

(N = 21)
(F = 13.3347, p = .0000)

Initial *aunque* is significantly different from *pero* and medial *aunque*, which are not different from one another

Turning to a consideration of whether the data indicate that subjects followed a rule in responding, three basic alternatives and one combination seem possible. Subjects might have responded in accordance with: (a) the rule proposed by the investigator, (b) a syntactic rule, (c) a random response strategy, and (d) a combination of (b) and (c). Subjects might have disregarded the second sentence entirely and followed an intrasentential syntactic rule, specifying the use of *aunque* in initial position and *pero* in medial position. Subjects following such a rule would score well on the *pero* and initial *aunque* subtests but poorly on the medial *aunque* subtest. It is also possible that subjects might follow a rule prescribing *aunque* initially and respond randomly on the medial conjunction. Subjects following this strategy would perform well on the initial *aunque* subtests but poorly on the other two subtests.

A review of the results of the analysis of variance and Newman-Keuls tests might appear to indicate that the subjects used a rule of syntax. They certainly performed better on the *pero* and initial *aunque* subtests than on the medial *aunque* subtest. Moreover, the means on both of the two former subtests are very high. However, the mean on the medial *aunque* subtest is also fairly high, causing one to question whether use of a syntactic rule can alone account for the data. Consequently, the data were subjected to further analysis.

As in study I, if subjects respond completely at random the experiment is a Bernoulli process and the probability of the chance occurrence of a score greater than or equal to 9 is $p<.05$ as is the probability of a score less than or equal to 3. Of the 21 subjects, 11 had scores greater than or equal to 9 on all three subtests and, therefore, appear to have behaved in conformity with the investigator's proposed rule of focus. Two of these scored 12 on all three subtests.

To calculate the probability of a given number of subjects performing at or above a certain level, it is again appropriate to use the binomial formula as these data also fit the specifications of a Bernoulli process. This procedure, therefore, allows us to look at the probability that the data from a given number of subjects would accord with the proposed rule in its entirety as well as with each part of the proposed rule of focus merely by chance. As mentioned above, 11 of the 21 subjects scored 9 or above on all three subtests, while 2 scored 12 on all three subtests. The probability of these results occurring by chance are $p<1.235x10^{-42}$ and $p<.000000057$ respectively. Results derived from decomposing the rule into its parts are also quite strong. The two parts of the rule state that: (a) When focus is on the second of two propositions conjoined in an adversative relationship, that relationship is indicated by *pero* when the conjunction immediately precedes the second proposition (the "*pero* subtest") and by *aunque* when the conjunction precedes the first proposition (the "initial *aunque* subtest") and (2) when focus is on the first of the conjoined propositions the indicated conjunction is *aunque* (the "medial *aunque* subtest"). Evidence for the first part of the rule, therefore, comes from the *pero* and initial *aunque* subtests. Twenty of the twenty-one subjects scored 12 on the initial *aunque* subtest ($p < 4.020 \times 10^{-73}$). Thirteen subjects scored 9 or above on the *pero* subtest ($p < 3.095 \times 10^{-17}$). Clearly there is very strong evidence that most subjects behave in accordance with the first part of the rule. Evidence for the second part of the rule comes from the medial *aunque* subtest. Fourteen of the 21 subjects scored 9 or above on this subtest ($p<1.6625 \times 10^{-18}$). Thus, the evidence that many subjects behaved in accordance with the second part of the rule is also strong.

There is also evidence that one subject used a syntactic rule. This subject scored eight on the *pero* subtest, two on the medial *aunque* subtest and twelve on the initial *aunque* subtest. This performance suggests reliance on a syntactic strategy of using *aunque* initially and *pero* medially.

An additional two subjects scored ten or above on both the initial *aunque* and the *pero* subtests while scoring five and seven respectively on the medial *aunque* subtest. Thus, their performance is high on those subtests whose correct answers can be predicted both by a syntactic rule and by the proposed rule of focus. This pattern may be the result of use of both rules.

To summarize, it appears that the rule of focus for selection of an adversative conjunction proposed for English in McClure and Geva 1983 also accounts for the Spanish adversative conjunction choice of half of the native Spanish speakers in study II. There is also evidence that a few subjects followed a syntactic rule.

RESULTS AND DISCUSSION OF THE SPANISH CONTINUATION SENTENCE CHOICE TASK

The Spanish conjunction choice test investigated Spanish speakers' use of a rule in selecting an adversative conjunction to unite two propositions when the focus of the conjoint sentence was indicated by a subsequent sentence. The Spanish continuation sentence choice test was designed to investigate whether Spanish speakers used the conjunction to detect an author's intended focus in a sentence and chose a sentence which cohesively further developed that proposition. In accordance with the rule of focus proposed above, continuations were

scored correct when they elaborated on the first of two propositions conjoined by medial *aunque* and on the second of two propositions conjoined by *pero* or initial *aunque*. The data were subjected to a one-way analysis of variance with subtest type as a within-subjects factor. The dependent variable was the score on each of the three subtests defined by conjunction type.

As can be seen in Table 3, which displays the means and standard deviations for each subtest, the means on the *pero* and initial *aunque* subtests are significantly higher than the mean on the medial *aunque* subtest which is low but *pero* and initial *aunque* are not significantly different from one another.

TABLE 3
Choice of continuation sentence task

	Conjunction in the first sentence		
	medial aunque	pero	initial aunque
means	7.5238	11.3333	11.5238
standard deviations	3.2499	1.0646	.8136

(N = 21)
(F = 25.9576, p = .0000)

Let us now consider whether the data indicate that the subjects followed the rule proposed by the investigator, used some other strategy, or responded at random. Other possible strategies include: (a) a primacy rule, (b) a recency rule, (c) a lexical rule, and (d) a semantic salience rule. Subjects strictly following a primacy rule would always choose continuations which elaborated on the first proposition of each basic sentence. Consequently, their responses would be scored as correct for items in which propositions were conjoined by medial *aunque* and as incorrect for all other items. Thus, their responses would accord with Part 2 of the proposed rule of focus, but would fail both of the subtests for Part 1. Subjects following a recency rule would choose continuations elaborating on the second proposition of each basic sentence. Thus, they would receive high scores on the *pero* and initial *aunque* subtests and low scores on the medial *aunque* subtest. Two contradictory lexical rules can be envisioned: one stating that *pero* directs focus to an initial proposition and *aunque* to a final proposition, the other stating the reverse. Subjects following the former rule would score high on the initial *aunque* subtest and low on the other two subtests. Subjects following the latter rule would score high on the *pero* and medial *aunque* subtests and low on the initial *aunque* subtest. Finally, subjects responding in accordance with a semantic salience rule would elaborate on the proposition they considered most salient regardless of the order of the two propositions or of the conjunction. Therefore, they would select the same continuation for all given permutations of a basic two-proposition sentence.

Of the 21 subjects, 8 had scores greater than or equal to 9 on all three subtests and, therefore, appear to have behaved in conformity with the investigator's proposed rule of focus.

Two of them scored 12 on all three subtests (the probability of one subject's scoring 12 is $p<.00024$).

Again, as in the conjunction choice task, to calculate the probability of a given number of subjects performing at or above a certain level, it is appropriate to use the binomial formula as these data also fit the specifications of a Bernoulli process. Using this procedure, we can therefore look at the probability that the data from a given number of subjects would be in conformity with the proposed rule in its entirety as well as with each part of the proposed rule of focus merely by chance. Pertaining to the rule in its entirety, 8 of the 21 subjects scored 9 or above on all subtests, while 2 scored 12 on all subtests. The probabilities of these results occurring by chance are $p < 3.3213 \times 10^{-31}$ and $p<.000000057$ respectively. Results derived from decomposing the proposed rule of focus into its parts are also quite strong. We find that on the *pero* subtest, 20 of the 21 subjects scored 9 or above, thus giving evidence that they responded in accordance with the proposed rule ($p < 3.9912 \times 10^{-26}$). On the initial *aunque* subtest, 21 of the 21 subjects scored 9 or above ($p < 2.1437 \times 10^{-27}$), and on the medial *aunque* subtest, 9 subjects scored 9 or above ($p < 3.7196 \times 10^{-12}$). Clearly, the evidence that at least some adult subjects perform in accordance with the proposed rule of focus on all subtests is quite strong.

Conversely, there is no evidence to support a primacy rule as there are no subjects whose scores followed a pattern of 9 or above on medial *aunque* items and chance or less on the other items. Nor are there any subjects whose pattern of responses indicates that they behaved in conformity with either a lexical rule or the semantic salience rule. There is, however, some evidence that the responses of a few subjects were influenced by a recency rule. Two of the 21 subjects scored 11 or above on the *pero* and initial *aunque* subtests and 1 or 2 on the medial *aunque* subtest. These scores are in conformity with a recency rule. An additional six subjects scored 11 or 12 on the *pero* and initial *aunque* subtests and 5 or 6 on the medial *aunque* subtest. These subjects thus perform well where both a recency rule and the proposed rule of focus would predict the same choice and randomly where they would yield opposing choices. Perhaps this pattern is the result of alternate use of both rules.

In summary, it seems that about one third of our subjects follows the proposed rule of focus, while an additional third seems to be influenced by a recency rule.

RESULTS AND DISCUSSION OF THE ENGLISH CONJUNCTION CHOICE TASK

Let us now look at the results of the English conjunction choice test given to the native Spanish speakers. As in the case of the data from the Spanish conjunction choice test, these data were subjected to a one-way analysis of variance with conjunction type as a within subjects factor. The dependent variable was again the score on each of the three subtests defined by conjunction type. There was a significant main effect ($F(2,60) = 14.2918$, $p = .0000$). A Newman-Keuls post hoc comparison of means ($p<.05$) indicated that all pairs of scores are significantly different, the scores being $X = 11.95$ for initial *although*, $X = 10.24$ for *but* and $X = 8.95$ for medial *although* (see Table 4).

TABLE 4
English conjunction choice task

	Conjunction in the first sentence		
	medial although	but	initial although
means	8.9524 1	0.2381	11.9524
standard deviations	2.5588	1.8413	.2182

(N = 21)
(F = 14.2918, p = .0000)

All three scores are significantly different from each other.

Of the 21 subjects, 12 had scores greater than or equal to 9 on all three subtests, and consequently appear to have behaved in conformity with the proposed rule of focus. One subject scored ten on the *but* subtest, twelve on the initial *although* subtest and three on the medial *although* subtest, thus suggesting he might have been operating with a syntactic rule. Three additional subjects scored twelve on the initial *although* subtest, between nine and twelve on the *but* subtest and between four and six on the medial *although* subtest, suggesting that they might have been using both the proposed rule of focus and a syntactic rule.

RESULTS AND DISCUSSION OF THE ENGLISH SENTENCE CHOICE TASK

Let us now look at the results of the English sentence choice test given to the native Spanish speakers. These data were also subjected to a one-way analysis of variance with conjunction type as a within subjects factor. Again the dependent variable was the score on each of the three subtests defined by conjunction type. Again there was a significant effect. A Newman-Keuls post hoc comparison of means ($p<.05$) indicated that the mean for medial *although* (X = 7.33) was significantly different from the mean for *but* (X = 10.71) and initial *although* (X = 11.33) but the means for the latter two were not significantly different from one another (see table 5).

TABLE 5
English choice of continuation sentence task

	Conjunction in the first sentence		
	medial although	but	initial although
means	7.3333	10.7143	11.3333
standard deviations	3.0386	1.5213	.9661

(N = 21)
(F = 23.3995, p = .0000)

Medial *although* is significantly different from *but* and initial *although*, which are not different from one another.

Seven of the twenty-one subjects scored nine or above on all three subtests and so appear to have conformed to the proposed rule of focus in English. Two subjects appear to have been following a recency rule. Both scored very low, 2, on the medial *although* subtest and high on the other two subtests, 12 and 12 in one case and 9 and 9 in the other. An additional six subjects scored high, 10 or above, on both initial *although* and *but* and at a random level, between 4 and 7, on medial *although*. These subjects may have been alternating between a recency rule and a focus rule.

COMPARISON OF THE SPANISH AND ENGLISH DATA

McClure and Geva (1983) demonstrated the existence of a rule of focus for the use and interpretation of adversative conjunctions in English. However, while more than half of the graduate students tested used this rule, a substantial number did not. The present study indicates a similar pattern in Spanish. A rule of focus for the use and interpretation of adversative conjunctions appears to exist in Spanish as well as in English. However, clearly, many native speakers do not follow it. Less than a third of the Mexican subjects from study I and between a third and a half of the Spanish and Latin-American students in study II produced responses in conformity to the rule of focus.

What is of particular interest here is whether there is transfer of the pattern of use and interpretation of the conjunctions across languages. In other words, do speakers who employ a rule of focus in Spanish employ it in English as well. Conversely, are there Spanish speakers who do not employ a rule of focus in Spanish but who do so in English?

Of the eleven subjects who clearly demonstrated use of the rule of focus in the Spanish conjunction choice test by obtaining a score of nine or above on all three subtests, five also obtained a score of nine or above on all three subtests of the English sentence continuation choice test. Two more came very close, receiving scores of eleven or twelve on *but* and initial *although* and scores of eight on medial *although*. Four seemed to show conflict between a recency rule and a focus rule.

Of the eight subjects who clearly demonstrated use of the rule of focus in the Spanish continuation sentence choice task, seven clearly demonstrated use of the rule of focus in the English multiple choice task. The other subject came very close, receiving scores of eleven on the *but* subtest, twelve on the initial *although* subtest, and eight on the medial *although* subtest.

It is the case then that those Spanish speakers who demonstrated use of the rule of focus in the Spanish continuation sentence choice task also demonstrated use of the rule in the English conjunction choice task. However a few of those who demonstrated use of the rule in the Spanish conjunction choice task did not demonstrate use of the rule in the English continuation choice task. These results may be due to the fact that for medial and initial *aunque* the sentence continuation choice task was more difficult than the conjunction choice task as was demonstrated by the means:

	medial aunque	initial aunque
sentence continuation	7.43	11.43
conjunction choice	8.90	11.95

and by the fact that in both Spanish and English more subjects demonstrate use of the rule of focus on the conjunction choice task than on the sentence completion task. Part of this difficulty may be attributable to the fact that a recency strategy was possible in the sentence completion task but not in the conjunction choice task.

If we now look at the data from the English conjunction choice test, we see that of the twelve subjects who demonstrated use of the rule of focus, seven also demonstrated use of this rule in the Spanish sentence continuation choice task. Two of the other five seemed to use a rule of recency in choosing a continuation sentence in Spanish as they scored eleven or twelve on the initial *aunque* and *pero* sentences and one and two respectively on the medial *aunque* sentences. The other three scored eleven or twelve on both initial *aunque* and *pero* and five on medial *aunque*, thus perhaps displaying a conflict with respect to use of a recency rule and use of a focus rule.

Finally, looking at the data from the English sentence continuation choice task, we find that of the seven subjects who behaved in conformity with a rule of focus, five clearly also did so in the Spanish conjunction choice task. Another subject probably also did so, as he had scores of twelve on initial *aunque*, nine on medial *aunque* and eight on *pero*. The last subject scored twelve on *pero* and initial *aunque* and five on medial *aunque*. This subject may have vacillated between a rule of focus and a syntactic rule on the Spanish conjunction choice task.

Again it appears that there is a task effect. Those who demonstrate use of a focus rule in the English sentence continuation choice task almost without exception also demonstrate its use in the Spanish conjunction choice task. However, a few of those who demonstrate use of a focus rule in the English conjunction choice task appear to use a recency rule in the Spanish sentence continuation choice task, an option not available in the conjunction choice task. Thus it appears that if a rule of focus is used in the sentence continuation choice task it will be used in the conjunction choice task but the reverse is not always true.

In summary then, it appears that subjects operate with the same discourse rules for the

use and interpretation of adversative conjunctions in both their first language, Spanish, and their second language, English. If they have acquired a rule of focus in Spanish, they will also display its use in English. However if they have not acquired it in Spanish, they will not employ it in English either, regardless of length of residence in the US.[3]

CONCLUSION

This study was designed to investigate two questions: (1) Do native Spanish speakers follow a discourse rule of focus for the use and interpretation of the Spanish adversative conjunctions *pero* and *aunque* which parallels that described for English in McClure and Geva (1983) and (2) Do native Spanish speakers who are highly proficient second language learners of English follow the discourse rule of focus for the use and interpretation of *but* and *although* in English? The results of the study indicate that there is a discourse rule of focus for the use of *pero* and *aunque* in Spanish which parallels the English rule. However as in English this rule is not followed by all well-educated native speakers. Furthermore the results indicate that it is those Spanish speakers who follow a discourse rule of focus for adversative conjunctions in their native language who follow this rule in English. This discourse rule is not explicitly taught to either first or second language learners, and it appears that if it is not acquired in the first language it is not acquired in the second no matter the length of residence, the education, or the fluency of the learner.

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NOTES

[1] Sentences of the type "*But the box was large, it was light" are not only ungrammatical but also meaningless. Consequently it was obvious even to nonnative speakers that only "although" could be used to introduce the first clause in sentences of this type.

[2] The use of "pero" to begin a sentence of the type "___ la caja era grande, era ligera" is no more grammatical or more logical than is its translation equivalent (see endnote 1). However, since there were no previous studies of the use of the Spanish conjunctions *pero* and *aunque*, items requiring the selection of a conjunction in this sentence frame were included to insure that a complete picture of conjunction choice was obtained.

[3] Performance on the tasks was regressed against length of residence in the US. The results showed no significant effect.

REFERENCES

Birdsong, D. (1992). Ultimate attainment in second language acquisition. *Language, 68*(4), 706-755.

Coppierters, R. (1987). Competence differences between native and near-native speakers. *Language, 63*, 44-573.

Dulay, H. and Burt, M. (1974). You can't learn without goofing, an analysis of children's second language "errors." In J. Richards (Ed.). *Error analysis perspectives on second language acquisition*. London: Longman.

Dulay, H. and Burt, M. (1975). Creative construction in second language learning and teaching. In M. Burt and H. Dulay (Eds.), *New directions in second language learning, teaching and bilingual education*. Washingotn, D.C.: Teachers of English to Speakers of Other Languages.

Gass, S. and Selinker, L. (Eds.). (1983). *Language transfer in language learning*. Rowley, MA: Newbury House.

Halliday, M. A. K. and Hasan, R. (1976). *Cohesion in English*. London: Longman.

Hyltenstam, K. (1990). Non-native features of near-native speakers: On the ultimate attainment of childhood L_2 learners. Unpublished master's thesis, University of Stockholm.

Johnson, J. S. and Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology, 21*, 60-99.

Johnson, J. S. and Newport, E. L. (1991). Critical period effects on universal properties of language: The status of subjacency in the acquisition of a second language. *Cognition , 39*, 215-258.

Kellerman, E. (1979). Transfer and non-transfer, where are we now. *Studies in Second Language Acquisition, 2*, 37-57.

Kellerman, E. and Sharwood Smith, M. (Eds.). (1986). *Crosslinguistic influence in second language acquisition*. New York: Pergamon Press.

Lapin, L. (1973). *Statistics for modern business decisions*. New York: Harcourt Brace Jovanovich, Inc.

Long, M. (1990). Maturational constraints on language development. *Studies in Second Language Acquisition, 2*, 251-285.

McClure, E. and Branstine, Z. (1990). Crosslinguistic influences on the use of tense and aspect. In H. Burmeister and P. Rounds (Eds.), *Variability in second language acquisition. Proceedings of the Tenth Meeting of the Second Language Research Forum. Vol. II.* Department of Linguistics. University of Oregon, Eugene, Oregon.

McClure, E. and Geva, E. (1983). The development of the cohesive use of adversative conjunction in discourse. *Discourse Processes, 6*, 411-432.

McLaughlin, B. (1987). *Theories of second language learning*. Baltimore,MD: Edward Arnold.

Odlin, T. (1989). *Language transfer: Cross-Linguistic influence in language learning*. Cambridge: Cambridge University Press.

Patkowski, Mark S. (1980). The sensitive period for the acquisition of syntax in a second language. *Language Learning, 30*, 449-472.

Sorace, A. (1991a). *Incomplete vs divergent representations of unaccusativity in non-native grammars of Italian*. Paper presented at the Second Language Research Forum, University of Southern California, Los Angeles.

Sorace, A. (1991b). *Unaccusativity and auxiliary choice in non-native grammars of Italian and French: Asymmetries and predictable indeterminacy.* Paper presented at the Boston University Conference on Language Development.